

LISTING OF THE CLAIMS

This following listing of claims replaces all prior claim listings and versions in the application:

1. (Previously Presented) A positioning system for detecting the position of a terminal, comprising:

an illumination device configured to transmit a signal including a unique information from a given installation position;

a terminal communicably connected to the illumination device and configured to extract the unique information from the signal transmitted from the illumination device; and

a position estimation device communicably connected to the terminal and receiving the unique information from the terminal, the position estimation device being configured to estimate a position of the terminal based on an illumination installation position information and the unique information received by the terminal, said illumination installation position information including the unique information and a position information indicating the installation position of the illumination device in association with each other,

wherein the position estimation device is configured to:

read out from the illumination installation position information the position information corresponding to the unique information based on one or more unique information extracted by the terminal within a past predetermined time period; ~~and~~

estimate the position of the terminal based on the read out position information,
add a weighting value to one or more unique information received by the terminal within a past predetermined time based on the reception time of the respective unique information; and
estimate the position of the terminal based on unique information selected based on a result of the addition.

2-4. (Canceled)

5. (Previously Presented) The positioning system according to claim 1, wherein the position estimation device is configured to estimate the position of the terminal based on the unique information received by the terminal most recently.

6. (Previously Presented) The positioning system according to claim 1, wherein the position estimation device is configured to estimate the position of the terminal based on most frequently received unique information among one or more unique information received by the terminal within a past predetermined time period.

7-8. (Canceled)

9. (Canceled)

10. (Previously Presented) The positioning system according to claim 1, wherein: the illumination device comprises a light emission unit for emitting an illumination light and a transmission unit for transmitting the unique information; the transmission unit comprises a white LED for emitting a visible light signal; and the white LED is configured to transmit the unique information on the visible light signal.

11. (Previously Presented) The positioning system according to claim 1, wherein: the illumination device comprises a light emission unit for emitting an illumination light and a transmission unit for transmitting the unique information; the transmission unit comprises an infrared LED for emitting an infrared ray signal; and the infrared LED is configured to transmit the unique information on the infrared ray signal.

12. (Previously Presented) The positioning system according to claim 1, wherein: the illumination device comprises a light emission unit for emitting an illumination light and a transmission unit for transmitting the unique information; the transmission unit comprises a wireless communication unit for transmitting a radio signal; and the wireless communication unit is configured to transmit the unique information on the radio signal.

13. (Previously Presented) The positioning system according to claim 1, wherein

the transmission unit is configured to transmit the unique information to the terminal at random timing.

14. (Canceled)

15-27. (Canceled)

28-29. (Canceled)

30-38. (Canceled)

39. (Canceled)

40. (Previously Presented) The positioning system according to claim 1, wherein the illumination installation position information is configured to be created by associating the unique information collected by the terminal and installation position of the illumination device with each other.

41. (Previously Presented) The positioning system according to claim 1, wherein: the positioning system further comprises a second positioning system; and the positioning system and second positioning system can be operated in a switchable manner.

42. (Original) The positioning system according to claim 41, wherein the second positioning system is a positioning system using a wireless LAN.

43. (Previously Presented) The positioning system according to claim 41, wherein the positioning system is configured to identify the position of the terminal by using the unique information that the illumination device transmits, in the case where requested terminal position information is logical position information.

44. (Previously Presented) The positioning system according to claim 41, wherein the positioning system is configured to identify the position of the terminal by using the second positioning system, in the case where the positioning system could not identify the position of the terminal by using the unique information.

45. (Previously Presented) The positioning system according to claim 41, wherein the positioning system is configured to determine whether to identify the position of the terminal by using the unique information or by using the second positioning system, based on the type of the requested terminal position information.

46. (Canceled)

47. (Previously Presented) The positioning system according to claim 1, wherein the positioning system is configured to display acquired terminal position information and to reacquire terminal position information depending on the accuracy of the acquired terminal position information.

48. (Previously Presented) The positioning system according to claim 1, wherein the positioning system has a function of storing attribute information concerning the terminal and of displaying the position information of the terminal corresponding to specified attribute information.

49. (Original) The positioning system according to claim 48, wherein the positioning system is configured to store, as the attribute information of the terminal, a name of a department to which a terminal user belongs.

50. (Canceled)

51. (Previously Presented) The positioning system according to claim 47, wherein

the positioning system is configured to display the terminal position information corresponding to a specified display condition and to specify, as the display condition, information of floors in which the terminal exists.

52. (Canceled)

53. (Canceled)

54. (Previously Presented) The positioning system according to claim 1, wherein the positioning system is configured to:

identify a user terminal in response to a position information request concerning a user of the terminal;

acquire the position information of the identified terminal; and

select one terminal in order of priority set for the respective terminals to acquire the position information thereof, in the case where a plurality of the user terminals exist.

55. (Original) The positioning system according to claim 54, wherein the priority is configured to be determined based on the type of the terminal.

56. (Original) The positioning system according to claim 54, wherein the priority is configured to be determined such that the position information of the terminal using a wireless LAN has a higher priority.

57. (Original) The positioning system according to claim 54, wherein the priority is configured to be determined based on presence/absence of a response from the terminal.

58. (Original) The positioning system according to claim 54, wherein the priority is configured to be determined based on the use state of the terminal.

59. (Canceled)

60-61. (Canceled)

62-70. (Canceled)

70. (Canceled)

71. (Currently Amended) [[The]] A positioning method according to claim 59, further comprising of a positioning system for detecting the position of a terminal,

the positioning system comprising:

an illumination device configured to transmit a signal including a unique information from a given installation position;

a terminal communicably connected to the illumination device and configured to extract the unique information from the signal transmitted from the illumination device; and

a position estimation device communicably connected to the terminal and receiving the unique information from the terminal, the position estimation device being configured to estimate a position of the terminal based on an illumination installation position information and the unique information received by the terminal, said illumination installation position information including the unique information and a position information indicating the installation position of the illumination device in association with each other,

the positioning method comprising:

reading out from the illumination installation position information the position information corresponding to the unique information based on one or more unique information extracted by the terminal within a past predetermined time period, by using the position estimation device,

estimating the position of the terminal based on the read out position information by using the position estimation device,

add a weighting value to one or more unique information received by the terminal within a past predetermined time based on the reception time of the respective unique information,

estimate the position of the terminal based on unique information selected based on a result of the addition; and

identifying, in the case where position detection processing can be switched between the positioning system and a second positioning system and where a terminal position information request is logical position information, the position of the terminal by using the unique information that the illumination device transmits.

72. (Original) The positioning method according to claim 71, wherein a positioning method carries out by the second positioning system is a positioning method using a wireless LAN.

73. (Previously Presented) The positioning method according to claim 71, further comprising identifying, in the case where the position of the terminal could not be identified by using the unique information, the position of the terminal by using the second positioning system.

74. (Previously Presented) The positioning method according to claim 71, further comprising

determining whether to identify the position of the terminal using the unique information or using the second positioning system based on the type of the requested position information.

75-77. (Canceled)

78-79. (Canceled)

80-81. (Canceled)

82-86. (Canceled)

87-90. (Canceled)

91-110. (Canceled)

111. (New) A positioning system for detecting the position of a terminal, comprising:

an illumination device configured to transmit a signal including a unique information from a given installation position;

a terminal communicably connected to the illumination device and configured to extract the unique information from the signal transmitted from the illumination device; and

a position estimation device communicably connected to the terminal and receiving the unique information from the terminal, the position estimation device being configured to estimate a position of the terminal based on an illumination installation position information and the unique information received by the terminal, said illumination installation position information including the unique information and a position information indicating the installation position of the illumination device in association with each other,

wherein the position estimation device is configured to:

read out from the illumination installation position information the position information corresponding to the unique information based on one or more unique information extracted by the terminal within a past predetermined time period; ~~and~~

increase the weighting value as the reception time becomes newer;

select unique information having the largest value resulting from the addition; and

estimate the position of the terminal based on the selected unique information.